

AMENDMENTS TO THE CLAIMS

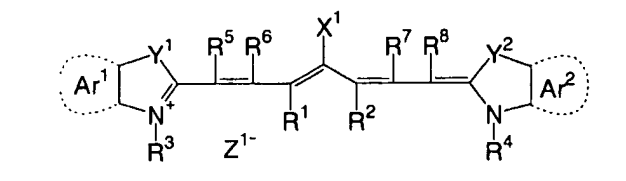
This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-3. (canceled).

4. (currently amended): A planographic printing plate precursor comprising:
on a substrate, a photosensitive layer containing an infrared absorbing agent, a
sulfonium salt polymerization initiator, a polymerizable compound and a binder polymer,
wherein the infrared absorbing agent is a cyanine dye represented by the following
formula (a):

formula (a)

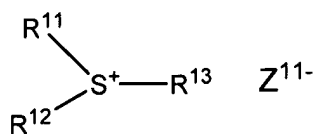


wherein, in the formula (a), X¹ represents -NPh₂; R¹ and R² each independently
represents a hydrocarbon group having 1 to 12 carbon atoms; Ar¹ and Ar² may be the same or
different and each represents an aromatic hydrocarbon group which may have a substituent
group; Y¹ and Y² may be the same or different and each represents a sulfur atom or a dialkyl
methylene group having 12 or less carbon atoms; R³ and R⁴ may be the same or different and
each represents a hydrocarbon group containing 20 or less carbon atoms, which may have a

substituent group; R^5 , R^6 , R^7 and R^8 may be the same or different and each represents a hydrogen atom or a hydrocarbon group having 12 or less carbon atoms; and Z^{1-} represents a counter anion,

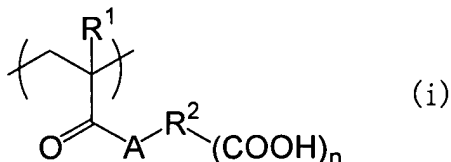
wherein the sulfonium salt polymerization initiator is a sulfonium salt represented by the formula (I):

formula (I)



wherein, in the formula (I), R^{11} , R^{12} and R^{13} may be the same or different, and each represents an aryl group containing 20 or less carbon atoms; at least two of the aryl groups are substituted with a chlorine atom; and Z^{11-} represents a counterion selected from the group consisting of a halogen ion, a perchlorate ion, a tetrafluoroborate ion, a hexafluorophosphate ion, a carboxylate ion and a sulfonate ion, wherein the central line average surface roughness (R_a) of the surface of the substrate on which the photosensitive layer is arranged is in the range of 0.35 to 0.55 μm according to claim 1,

wherein the binder polymer has a repeating unit represented by the following formula (i):



wherein in formula (i), R^1 represents a hydrogen atom or a methyl group; R^2 represents a linking group having a chain structure composed of two or more atoms selected from the group consisting of a carbon atom, a hydrogen atom, an oxygen atom, a nitrogen atom and a sulfur atom, wherein the total number of atoms in R^2 is 2 to 82; A represents an oxygen atom or $-NR^3-$ wherein R^3 represents a hydrogen atom or a monovalent hydrocarbon group having 1 to 10 carbon atoms; and n is an integer of 1 to 5.

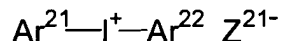
5. (original): A planographic printing plate precursor according to claim 4, wherein the substrate is an aluminum substrate.

6. (original): A planographic printing plate precursor according to claim 5, wherein the surface of the aluminum substrate is subjected to at least one surface treatment selected from the group consisting of mechanical surface roughening, chemical etching, electrolytic grinding treatment, and electrochemical surface roughening.

7-9. (canceled).

10. (currently amended): A planographic printing plate precursor according to claim 74, wherein the photosensitive layer further comprises at least one of iodonium salt represented by the following formula (II) and diazonium salt represented by the following formula (III) in addition to the sulfonium salt polymerization initiator;

formula (II)



wherein in formula (II), Ar^{21} and Ar^{22} each independently represents an aryl group having 20 or less carbon atoms which may have a substituent group selected from the group consisting of a halogen atom, a nitro group, an alkyl group having 12 or less carbon atoms, an alkoxy group having 12 or less carbon atoms and an aryloxy group having 12 or less carbon atoms; and Z^{21-} represents a counterion selected from the group consisting of a halogen ion, a perchlorate ion, a tetrafluoroborate ion, a hexafluorophosphate ion, a carboxylate ion, and a sulfonate ion;

formula (III)



wherein in formula (III), Ar^{31} represents an aryl group having 20 or less carbon atoms which may have a substituent group selected from the group consisting of a halogen atom, a nitro group, an alkyl group having 12 or less carbon atoms, an alkoxy group having 12 or less carbon atoms, an aryloxy group having 12 or less carbon atoms, an alkylamino group having 12 or less carbon atoms, a dialkylamino group having 12 or less carbon atoms, an arylamino group having 12 or less carbon atoms and a diarylamino group having 12 or less carbon atoms; and Z^{31-} represents a counterion selected from the group consisting of a halogen ion, a perchlorate ion, a tetrafluoroborate ion, a hexafluorophosphate ion, a carboxylate ion and a sulfonate ion.

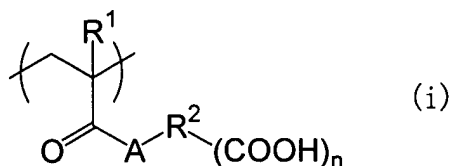
11. (original): A planographic printing plate precursor according to claim 10, wherein the substrate is an aluminum substrate.

12. (original): A planographic printing plate precursor according to claim 11, wherein the surface of the aluminum substrate is subjected to at least one surface treatment selected from the group consisting of mechanical surface roughening, chemical etching, electrolytic grinding treatment, and electrochemical surface roughening.

13. (currently amended): ~~A~~The planographic printing plate precursor comprising:

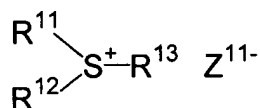
~~on a substrate, a photosensitive layer containing an infrared absorbing agent, a sulfonium salt polymerization initiator, a polymerizable compound, and a binder polymer, wherein the binder polymer has a repeating unit represented by the following formula (i), according to claim 4, wherein the polymerizable compound is an addition-polymerizable compound having at least one ethylenically unsaturated double bond, the sulfonium salt polymerization initiator is a sulfonium salt represented by the following formula (I), and the central line average surface roughness (Ra) of the surface of the substrate on which the photosensitive layer is arranged is in the range of 0.35 to 0.55 μm ,~~

~~formula (i)~~



wherein in formula (i), R^1 represents a hydrogen atom or a methyl group; R^2 represents a linking group composed of two or more atoms selected from the group consisting of a carbon atom, a hydrogen atom, an oxygen atom, a nitrogen atom and a sulfur atom, wherein the total number of atoms in R^2 is 2 to 82; A represents an oxygen atom or NR^3 where R^3 represents a hydrogen atom or a monovalent hydrocarbon group having 1 to 10 carbon atoms; and n is an integer of 1 to 5;

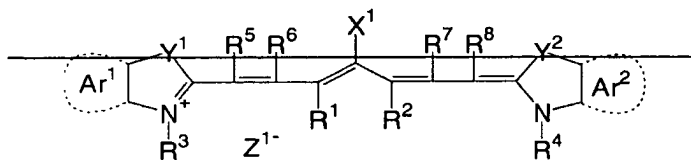
formula (I)



wherein in formula (I), R^{11} , R^{12} and R^{13} may each be the same or different and each represents an aryl group containing 20 or less carbon atoms; at least two of the aryl groups are substituted with a chlorine atom; and Z^{11-} represents a counterion selected from the group consisting of a halogen ion, a perchlorate ion, a tetrafluoroborate ion, a hexafluorophosphate ion, a carboxylate ion, and a sulfonate ion;

wherein the infrared absorbing agent is a cyanine dye represented by the following formula (a):

Formula (a)



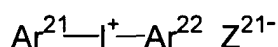
wherein, in the formula (a), X¹ represents ~~NPh₂~~; R¹ and R² each independently represents a hydrocarbon group having 1 to 12 carbon atoms; Ar¹ and Ar² may be the same or different and each represents an aromatic hydrocarbon group which may have a substituent group; Y¹ and Y² may be the same or different and each represents a sulfur atom or a dialkyl methylene group having 12 or less carbon atoms; R³ and R⁴ may be the same or different and each represents a hydrocarbon group containing 20 or less carbon atoms, which may have a substituent group; R⁵, R⁶, R⁷ and R⁸ may be the same or different and each represents a hydrogen atom or a hydrocarbon group having 12 or less carbon atoms; and Z¹⁻ represents a counter anion.

14. (original): A planographic printing plate precursor according to claim 13, wherein the substrate is an aluminum substrate.

15. (original): A planographic printing plate precursor according to claim 14, wherein the surface of the aluminum substrate is subjected to at least one surface treatment selected from the group consisting of mechanical surface roughening, chemical etching, electrolytic grinding treatment, and electrochemical surface roughening.

16. (previously presented): A planographic printing plate precursor according to claim 13, wherein the photosensitive layer further comprises at least one of the iodonium salt represented by the following formula (II) and the diazonium salt represented by the following formula (III) in addition to the sulfonium salt polymerization initiator,

formula (II)



wherein in formula (II), Ar^{21} and Ar^{22} each independently represents an aryl group having 20 or less carbon atoms which may have a substituent group selected from the group consisting of a halogen atom, a nitro group, an alkyl group having 12 or less carbon atoms, an alkoxy group having 12 or less carbon atoms and an aryloxy group having 12 or less carbon atoms; and Z^{21-} represents a counterion selected from the group consisting of a halogen ion, a perchlorate ion, a tetrafluoroborate ion, a hexafluorophosphate ion, a carboxylate ion, and a sulfonate ion;

formula (III)



wherein in formula (III), Ar^{31} represents an aryl group having 20 or less carbon atoms which may have a substituent group selected from the group consisting of a halogen atom, a nitro group, an alkyl group having 12 or less carbon atoms, an alkoxy group having 12 or less carbon atoms, an aryloxy group having 12 or less carbon atoms, an alkylamino group having 12 or less carbon atoms, a dialkylamino group having 12 or less carbon atoms, an arylamino group

having 12 or less carbon atoms and a diarylamino group having 12 or less carbon atoms; and Z^{31-} represents a counterion selected from the group consisting of a halogen ion, a perchlorate ion, a tetrafluoroborate ion, a hexafluorophosphate ion, a carboxylate ion, and a sulfonate ion.

17. (original): A planographic printing plate precursor according to claim 16, wherein the substrate is an aluminum substrate.

18. (original): A planographic printing plate precursor according to claim 17, wherein the surface of the aluminum substrate is subjected to at least one surface treatment selected from the group consisting of mechanical surface roughening, chemical etching, electrolytic grinding treatment, and electrochemical surface roughening.

19. (new): The planographic printing plate precursor according to claim 4, wherein R^2 in formula (i) has an ester linkage.